IN THE DRAWINGS

A complete set of substitute drawings 1-7 on six sheets is herewith submitted.

IN THE SPECIFICATION

A substitute specification in both marked version as well as clean version is attached.

REMARKS

DRAWINGS

The substitute drawings 1-7 only contain one change in Fig. 1. The overflow throttles, that were previously shown as tubular, are now of conical shape as shown in Fig. 5. This was done in order not to present a prior-art embodiment as Fig. 1, which would then end up on the patent cover. Since the new shape was copied from one of the presented embodiments, no new matter was added.

Previous Fig. 6 was removed. Accordingly, previous Figs. 7 and 8 were renumbered to 6 and 7. All other drawings are only resubmitted in a cleaner form and don't contain any changes to their content.

SPECIFICATION

The attached substitute specification includes corrections of terms that were translated from the German original in a non-idiomatic way so that, while they could be read in the proper way, they still rendered the context hard to understand.

For instance, the German term "Schwerpunkt," which literally translated means "heavy point," was translated as "center of gravity." However, a throttle technically does not have a center of gravity, although it does have a point of "heaviest", i.e. greatest, throttle effect.

Similarly, a piston does not have a radial center axis. It does have a radial center plane, i.e. the radial plane through the middle of the piston axis.

While a common part circle is well understood in German terminology, in English one would call it a circle concentric with the piston axis.

The description of previous Fig. 6 was deleted.

The language of previous claims 3 and 7, current claim 26, was added to the specification. From Figs. 3-5 and previous claims 3 and 7, it is evident that all of the embodiments have the location of the greatest flow resistance closer to the spring damper chamber (13) so that no new subject matter was added.

CLAIMS

Claim 9, that was **objected to** for its limitation of "at least about 5%" was canceled. However, this quantification was not an error, and thus was left in the specification. The increase of flow resistance due to turbulent flow depends on the shape and wall surface of the overflow throttles and the pressure difference on both sides of the piston. So it may be that for certain designs this increase only reaches the 5% mark.

Claims 18-24, which were rejected under **35 USC § 112**, have been canceled. Claims 27 and 28 were added, which nearly literally quote the description of Figs. 3 and 4, respectively, and thus leave no uncertainty as to which design they refer to.

Claims 1-24 were rejected under **35 USC § 103** over German patent '932, Yamaoka, and British patent '780.

While the British patent '780 does show varying throttle shapes, the difference in flow resistance for different piston movements is accomplished by the resilient plate 12 and not by the throttle bores themselves. The same applies to Yamaoka, where this result is effected by the disc plates 36,38, 40, 42, 44. The present invention eliminates exactly that, as stated in the object of the invention.

While Yamaoka does state that "*the difference between the fluid pressures before and behind each of the first and second constant orifices...is decreased and the flow velocity of the working fluid passing through each of the orifices is decreased gradually so that the Reynolds number of the fluid passing through the respective*

orifices is decreased", the passage talks about the orifices in the bendable disc plates, not in the piston. The construction of the orifices is rather complicated, and if all these plates were manufactured in one piece with the piston, there would be no possible way of providing the piston with such orifices and or to provide the bendable properties that Yamaoka deems necessary to achieve the different flow characteristics for different flow directions (see column 7, lines 41–60). It does in no way teach how to achieve the critical Reynolds number, i.e. the transition from laminar to turbulent flow, by means of the piston bores alone. If Yamaoka had seen a way to provide such a one-piece construction, he would not have resorted to using five additional plates, or at least he would have suggested a possible simpler construction. Accordingly, Yamaoka, due to the complicated arrangement of orifices and the perceived requirement of bending the disc plates, rather teaches away from the subject of the present invention: If the flow characteristics for passing through the piston are supposed to be different for the two possible flow directions, additional plates are required.

German patent '932 has no additional plates. The bores themselves are not described in the specification or the claims but in one short sentence in column 3, lines 4-7. It reads as follows:

In the piston (14) – schematically indicated – overflow throttles (66,68) are provided, which participate in the determination of the damping characteristics of the spring damper unit (10).

No teaching is made regarding the choice of shape or the arrangement, and a schematic indication is not necessarily a depiction true to shape. The only clue that can be taken from the pictures is a symmetrical arrangement with respect to the radial center plane of the piston, i.e. the number of overflow throttles that have a restriction above the center plane of the piston is exactly the same as the number of plates with restrictions below the center plane. The flow resistances along the bores or different piston directions are not even mentioned or considered.

Accordingly, the prior art teaches that, if the same flow resistance is desired for both directions of piston movement, bores in the piston itself will suffice. But if directional differences are desired, extra plates are necessary due to a complicated

arrangement of orifices and the requirement of movement of these plates relative to the piston (in '780, see lines109-111,; in Yamaoka see column 7, lines 42-46).

Applicant thus believes that claim 25 is inventive and patentable over the cited prior art by effecting the directionally different flow resistances solely by shaping the bores of the overflow throttles, thus eliminating the need for additional plates. It accounts for the prior art by stating that the overflow throttles "consist" of bores (and don't just "comprise" bores) as well as by stating that all restrictions are located on the same side of the radial center plane.

All other claims presented are dependent on claim 25 and are thus non-obvious along with claim 25.

Applicant believes that the application is now in proper shape for allowance. However, if the Examiner feels that a conversation over the phone would facilitate the further proceedings, the undersigning agent welcomes such an opportunity.

STATEMENT

The undersigned, an agent registered to practice before the Office, hereby states that the enclosed substitute specification includes the same changes as are indicated in the marked-up copy of the original specification. Neither the specification nor the drawings contain new subject matter.

Respectfully submitted,

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